THE DIGITAL AGE:
The Australian Digital TV Experience

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Overview

From an Australian perspective, digital is not just about the future. It's what we are doing now.

Digital is the most significant catalyst for change in the broadcasting industry for decades. Broadcasters exist for one reason: to deliver engaging content to our audiences. Digital provides the means to produce more and better content. However, to realise the full potential of digital, broadcasters have to fundamentally change the way we do business. The issues are complicated and new types of business relationships have to be forged. Broadcasters have to work with their traditional competitors – other broadcasters - as well as manufacturers and technology companies, to develop common infrastructure.

There has been a huge debate in Australia, which continues to this day, over elements of the Federal Government's digital policy, such as the HDTV and multichannelling requirements and technical standards. Underlying everything is the question: how can we deliver into people's homes the best and widest basket of new digital services?

It is a complex area that requires complex solutions, and to make sense of where Australian television is going you have to know from were we've come.

The Australian broadcasting landscape

Australian free-to-air television began almost 50 years ago and today is viewed by over 7.5 million households. Subscription, or Pay Television, began in 1996 and has a 23% market penetration. Most metropolitan markets are served by five free-to-air networks that reach 100% of the market. These include three commercial networks – the maximum allowed by law in any one area – and two Government-funded, but independent, public broadcasters – SBS and the ABC. The ABC is fully funded with a Charter to provide comprehensive programming. SBS obtains about 20% of its funds from advertising. Its Charter is to deliver multicultural and multilingual programs.

How digital broadcasting began – the policy debate

When the Government set digital television policy in the late 1990s, the imperative was to get the free-to-air networks to migrate to digital, to free up analogue spectrum.

At the time, there was lengthy debate among the incumbent broadcasters, the Pay TV industry, and a number of print media and telecommunications companies about how best to use the digital spectrum. In simple terms, the argument centred on whether to open the tightly regulated market to investment from new players. If not, then the question was: what incentives could be given to the incumbent broadcasters to invest the estimated one billion dollars in infrastructure needed for the transition to digital?

The outcome has profoundly shaped digital broadcasting in Australia. While Pay TV digitisation has been left to market forces, free-to-air terrestrial broadcasting by the public and commercial broadcasters is heavily regulated. Commercial free-to-airs have received free spectrum for a limited period, but in return have had to make significant investment and work within a complex regulatory framework.

The digital broadcasting framework

The *Broadcasting Service Act* outlines the framework for free to air digital:

〈 *Simulcasting analogue and digital:* The three commercial and two public broadcasters have been allocated 7MHz of digital spectrum free of charge and there will be no new free-to-air entrants into digital broadcasting until 2007. Since January 2001, all free-to-air metropolitan broadcasters have been required to simulcast their programs in both analogue and Standard Definition digital (in a 16:9 format). Regional broadcasters must do the same by 2004. The analogue spectrum is due to be handed back in 2008, (though industry predictions are that the simulcast period will extend well beyond that date, given the limited sales of digital receivers).

〈 *High definition requirements:* From July this year, all free-to-air broadcasters must transmit annually a minimum of 1,040 hours of programs produced in High Definition format – an average of 20 hours per week. Public broadcasters can meet their High Definition quotas by up-converting Standard Definition programs. In Australia, the standard for most broadcasters is 1080i, which is fairly spectrum intensive. However, SBS has a special exemption allowing us to broadcast in 576p. This makes it easier for SBS to broadcast several multichannels at the same time as High Definition broadcasts.

- *Multichannelling:* Commercial broadcasters cannot multichannel (though they can use other digital channels to provide simultaneous enhancements to a main channel program, such as different camera angles or statistics in a sports program). The public broadcasters can multichannel, but are restricted in the genres they are allowed to broadcast on a multichannel – for example, they cannot show sports, drama series or English language news. Public broadcasters can (and do) broadcast their radio services on digital television.

- *Datacasting:* Free-to-air broadcasters are allowed to use spare transmission capacity to provide a new type of information programming called 'datacasting,' a statutory creation broadly defined as digital broadcasting services that provide text, data, music and visuals in formats such as information programs, educational material, interactive games, and e-mail. Datacasting *excludes* sports, entertainment and traditional television program formats.

  The Government's original plan was to sell spare datacasting capacity to non-broadcaster commercial interests, giving them the opportunity to enter digital broadcasting without directly competing with the incumbents. However, initial interest quickly waned, mostly due to these restrictions, and a planned Government auction of datacasting spectrum licences was shelved. Despite the setback, datacasting trials have continued, and all free-to-air networks are involved in a joint effort to develop a common electronic program guide.

Some elements of the Government's digital legislation are contentious, particularly among commercial media organisations. They complain of unreasonable restrictions and argue that the strict regulatory framework is affecting the industry's ability to develop digital's full potential. Aspects of the Government's digital policy are due to be reviewed over the next two and a half years in a series of statutory reviews.

The broadcaster perspective

Some parts of the broadcasting industry are particularly concerned about multichannel restrictions and High Definition obligations.

Multichannelling

The ability to multichannel is currently restricted to the two public broadcasters – SBS and the ABC. But its development has been slow, principally because both broadcasters lack resources to create new content. In 2001, the ABC launched its two digital multichannels – *ABC Kids* (for young children) and *Fly* (its youth oriented channel). SBS followed last year with its multilingual *World News Channel* that broadcasts news bulletins from 19 countries in 18 languages and *SBS Essential*, an electronic program guide with news and weather headlines and program information. *SBS Essential* is a prototype datacasting service, designed to accommodate interactivity when interactive receivers become available. All of these channels were delivered without additional Government funding.

The industry supports the view that public broadcaster multichannelling is a key factor in convincing people to buy digital receivers and a way to unlock the broadcast industry's billion-dollar investment in digital infrastructure. However, despite the intensive lobbying by the broadcasters and industry for this year's Federal Budget, no additional funds for content were provided. Subsequently, in July, the ABC ceased broadcasting its two digital channels. SBS has continued to broadcast the *World News Channel* and *SBS Essential* as low-cost, basic service channels. Any major enhancements have, for the moment, been put on hold.

We are continuing to lobby for extra funds, to enable SBS to expand its *World News Channel* and introduce a *World Music Channel* in line with our mandate to broadcast culturally inclusive programming. We believe digital multichannelling is strategically critical to our broadcasting future.

High Definition

High Definition pictures have superior image resolution to both Standard Definition pictures and to the existing analogue. The regulations for HDTV were among the most hotly debated issues in the development of Australian digital policy. Supporters claimed that cinema quality pictures and sound would be a major impetus to the purchase of digital receivers. Critics of the policy argued it was a spectrum grab by commercial networks to justify excluding other entrants and that its consumer appeal was more skewed to high income earners.

Underlying the whole debate are divergent views on what is needed to drive digital policy forward. There is no consensus among Australia's three commercial free-to-air networks. Two of them – the Nine and Ten Networks – do not support commercial broadcaster multichannelling, but for different reasons. The Nine Network has significant interests in Pay television, and the Ten network has invested heavily in High Definition. The other commercial network, Seven wants to be able to provide multichannels. This lack of consensus has made it difficult for the Government to adjust the policy settings.

Digital benefits
While the public debate about digital has revolved around the delivery end of the business, there has been little focus on the back end of the business - the enormous benefits digitisation has brought to production processes. For example, in converting to digital broadcasting, we have moved to more efficient film-gathering, studio and production processes and are producing more from the same resources.

Similarly, there is enormous value in the digital transmission infrastructure. In remote and regional Australia, the ability to transmit 19 megabits of information over 7MHz of spectrum creates significant opportunities to bridge the city/country communications divide.

The consumer proposition
Up to this point, I have looked at the market from the broadcaster's perspective. But ultimately, it's our audiences that are fundamental to the success of digital because we need their investment in new digital receivers. Digital terrestrial services are now broadcast to areas reaching well over 80% of the Australian population. So, in simple terms, if Australians want digital, they can receive it. However, almost three years after its launch, only about 145,000 digital receivers have been sold to a potential market of 7.5 million homes. By the end of the year, it is estimated that 200,000 households will have digital television.

To convince more people that digital content and quality are worth the investment, free-to-air broadcasters must engage more closely with the consumer electronics industry. We need to learn from the experiences of the Pay television sector about interacting with customers and generating demand.

I don't believe that there is a single 'killer application' that will draw vast audiences to digital. But in a sense, this debate misrepresents the complexity of the issue. In my view, arguments about the attractiveness of multichannels versus High Definition are missing the point. It's not, or shouldn't be, an either/or proposition.

For our audiences, it is about a device that adds value to their lives in a number of ways, and it is probably a combination of:

- low cost receivers;
- extra services, easily accessed – both content and interactivity;
- improved reception, both picture and sound; and
- consumer awareness of the true benefits of digital.

Low cost receivers
Due to the mandatory High Definition quotas and other technical standards imposed on the free-to-air broadcasters, the manufacture of digital receivers for the Australian market is very specialised. Unlike many other countries, that have large cable TV or subscription markets, Australians are not used to paying for services or dealing directly with the service provider. The digital receiver also needs to be compatible with five free-to-air broadcasters, and that means that our market for digital televisions and set-top boxes is, by necessity, a horizontal retail market.

Commercial broadcasters subsidised the first production runs of set-top receivers. Today, however, the market supports a range of digital televisions and set top boxes. The lowest priced Standard Definition set-top box costs about $A250. Integrated televisions are expensive, starting at several thousand dollars. And integrated High Definition televisions cost even more – from $A4,000 – well beyond the average household budget.

There are no Government regulations requiring manufacturers to include digital receivers in new televisions and so most TVs sold in Australia are not integrated. Widescreen TVs are selling well to those customers who want to enjoy DVDs and home theatre and this is another factor encouraging the purchase of digital set-top boxes to receive widescreen pictures. Sales of widescreen TVs have increased by 88% in the past six months and consumer awareness is increasing through heavy promotion by retailers and manufacturers.

Extra content
In other countries, one of the fundamental inducements for digital sales has been the availability of extra, quality channels. Early research showed that this was also the case in Australia. Unfortunately, the uncertainty about public multichannelling limited the industry's ability to market extra channels as a key feature of digital television. Enhanced programming around premier events has also been an inducement for consumers to switch to digital. The Rugby World Cup in Australia is an example. The Seven Network, which will broadcast the event with enhancements, is predicting a sale surge of 35,000 digital receivers to rugby fans.

Interactivity
On its own, interactivity may not be sufficient to trigger sales, but it is an additional attraction. The Australian Government has not regulated a standard for interactivity, but has left it for the market to decide.

As the interactive capacity of the receiver has to be compatible with the five different television networks, the free-to-air broadcasters have had to develop the most appropriate common standards for the API, the application program interface. The preference has been for an open, non-proprietary standard. Early on, the European open standard MHP was favoured, but its development has been slower and more expensive than expected. The Australian market awaits a functional, cost effective interactive system that may, or may not include MHP.

However, it is important to emphasise that the lack of an interactive box has not stymied increased interactivity between programs and audiences. Interactivity is now commonplace as a critical way to engage with audiences: all television networks are regularly and actively using the Internet and SMS messaging from mobile phones to interact with viewers.

Three years ago, SBS pioneered the first interactive drama on Australian television. *Going Home*, a 30 minute weekday drama, was scripted, shot, edited and broadcast on the same day. Viewers emailed story suggestions each evening and many were incorporated in following episodes. In another SBS program, *Tales from a Suitcase*, we ran a crawl in the closing credits asking for personal stories about migrating to Australia. Expecting only a handful, we received 22,000 emails. This sort of response highlights the opportunities, and technical challenges, of future, larger scale interactivity via the television.

There are currently only a small number of Personal Video Recorders on the Australian market. Their functionality is limited, mostly due to the lack of a common EPG and interactivity.

Consumer awareness
With the digital retail market still evolving, consumer uncertainty about the benefits of digital television remains an issue. To address this, the free-to-air networks, retailers and manufacturers established an industry organisation, Digital Broadcasting Australia, 3 years ago. DBA provides consumers and retailers with information about the benefits of digital. Because of the uncertain environment – changes to the multichannels and slow development of receiver based interactivity, there has not been a coherent and consistent marketing message to the public. The main selling messages are currently about clear pictures and better sound. On of the challenges for emerging digital TV markets is to get simple and compelling messages about digital to consumers.

Impact of Pay TV Digitisation
Up to this point, I have focused on the dominant free-to-air market. The other significant player is Pay television. The digitisation of Pay TV involves quite different imperatives and primarily aimed at increasing market penetration. The industry predicts digitisation will increase Pay TV's market share from its present 23% to 40% by 2008. Its share of advertising revenue is predicted to jump from its current 1-3% to about 15% within 10 years.

Some Pay TV companies already operate digital services via satellite and penetration will increase significantly next year following a decision last year by Australia's competition and consumer regulator to approve a significant content-sharing deal between the two largest players – Foxtel and Optus – clearing the way for Foxtel to invest $600m in digitisation.

Free-to-air channel access to the Pay TV digital platform was an issue for the free-to-air networks last year and at various times there have been suggestions for different forms of government intervention including mandating a dual tuner-receiver and 'must carry' legislation. However, as the Government does not support this sort of intervention, much of this year has been taken up with negotiations for the re-transmission of free-to-air digital services on the Pay platforms. The negotiations are complicated by the number of regional markets to which the various networks broadcast and the need to reconfigure satellite capacity.

In a business sense, the contrast between free-to-air and Pay TV is quite pronounced and critical. Pay TV, as a vertically integrated industry, is able provide to its customers with its own proprietary set-top boxes. This means that early next year, when Foxtel goes digital, it will be able to provide *hundreds* of new channels plus sophisticated interactivity – including near 'on-demand' movies and news, subscription games and enhanced sport – that will not be available on free-to-air television for some time to come. In its second phase, late next year, Foxtel will also offer messaging services and a personal video recorder.

For digital terrestrial broadcasters, the race to capture the so-called "digital high ground" is on.

Public Broadcasting - Driving Digital TV in Australia
As a final point, I would like to reflect on the public interest elements of digitisation because, ultimately, public broadcasters are obligated to ensure that the best uses of digital are realised, not just the most commercial ones.

The duty of public broadcasters is to provide a valuable and valued contribution to national knowledge and culture and to deliver information and perspectives that go well beyond purely commercial entertainment. Bearing this in mind, Australia's public broadcasters have consciously and deliberately used digital broadcasting to better serve Australian audiences. Multichannelling, for instance, is a means to extend our impact, reach new viewers and experiment with new ways to interact with our audiences.

Traditionally, public broadcasters have been recognised as content innovators, but in the digital world, it is also about innovating with the technology. Because we are not proprietary with our learning, the industry benefits from our experimentation. Out of our work new applications and processes – both public interest and commercial – will become available.

To this end, SBS has formed strategic and commercial partnerships with leaders in the technology industry to explore and exploit digital's full potential. This new type of business relationship comes from necessity: we simply don't have the funds to buy our way into new technology once it is developed. Instead, by working with leading edge technology companies at the development stage, SBS has been able to test new processes and applications. For example:

- In partnership with Sun Microsytems, SBS developed the first interactive MHP application for Australian conditions. This work was led to free-to-air broadcasters working jointly to develop a common EPG.
- To establish our two digital multichannel services – the *World News Channel* and *SBS Essential* – SBS joined forces with an Australian technology company, MediaWare, to build an automated system that has since been sold internationally, including to the CBS network in the United States.

SBS and the ABC have also joined with consumer electronics manufacturers Phillips, Sony and Panasonic in a group called PBM – Public Broadcasters and Manufacturers. Collectively we undertake collaborative research and development work to assist with the development of digital receivers. This has led to collaboration with the commercial networks to establish an independent conformance and testing regime for digital television and, in particular, over-the-air software downloads. Being involved in product upgrades – which are at the core, not the periphery of digital television – is just one example of the new role broadcasters have forged for themselves in the digital world.

Besides these external initiatives, SBS has used digital technology to maximise its day-to-day operations. Three years ago, we married our information technology and new media businesses to integrate the way that we make content. Rather than making our New Media area a separate online business, we enabled every content creator in television and radio to publish online. SBS was one of the earliest developers and users of laptop computer cameras, web transmission of international content and single person news and current affairs production.

As a small broadcaster with little commercial impact in the Australian market, SBS has played an important part in raising the profile of digital television in Australia. SBS has shown that modest government investment in public broadcaster content can trigger a significant flow-on effect, and contribute significantly to the development of the digital retail market.

It is my firm belief that public broadcaster multichannelling – properly funded and resourced – can be an effective and creative exponent of Australia's cultural, social and political diversity. With imported programs saturating hundreds of Pay TV channels, public broadcasters will play an increasingly important role by offering local news and telling Australian stories.

Digital television will enrich the viewing experience, but it's our responsibility as public broadcasters to ensure that, through quality programming, we feed the mind as well as please the eye.

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